CLAIMS

1. A method of controlling memory usage in a computer system having limited physical memory, wherein one or more application programs execute in conjunction with an operating system, comprising the following steps:

setting a plurality of memory thresholds;

at increasingly critical memory thresholds, wielding increasing operating system control over said one or more application programs to minimize memory usage.

2. A system as recited in claim 1, wherein the step of wielding increasing operating system control comprises the following steps:

at a less critical memory threshold, interacting with at least one of the application programs to limit its use of memory;

at a more critical memory threshold, terminating at least one of the application programs without allowing its further execution.

3. A system as recited in claim 1, wherein the step of wielding increasing operating system control comprises the following step:

prompting a user to designate at least one of the applications programs and then requesting it to close itself.

4. A system as recited in claim 1, wherein the step of wielding increasing operating system control comprises the following step:

prompting a user to designate at least one of the applications programs and then terminating it without allowing its further execution.

5. A system as recited in claim 1, wherein the step of wielding increasing operating system control comprises the following steps:

at a first memory threshold, requesting at least one of the application programs to limit its use of memory;

at a second memory threshold, requesting at least one of the application programs to close itself;

at a third memory threshold, terminating at least one of the application programs without allowing its further execution.

6. A system as recited in claim 1, wherein the step of wielding increasing operating system control comprises the following steps:

at a first memory threshold, requesting at least one of the application programs to limit its use of memory;

at a second memory threshold, prompting a user to designate at least one of the application programs and then requesting it to close itself;

at a third memory threshold, prompting the user to designate at least one of the application programs and then terminating it without allowing its further execution.

7. A system as recited in claim 1, further comprising the following additional step:

at one or more of the memory thresholds, reclaiming unused stack memory.

8. A system as recited in claim 1, further comprising the following additional step:

at one or more of the memory thresholds, discarding read-only memory.

9. A computer-readable storage medium having computer-executable instructions for performing the steps recited in claim 1.

10. A computer-readable storage medium having instructions for controlling memory usage in a computer system having limited physical memory, wherein one or more application programs execute in conjunction with an operating system, the instructions being executable by the computer system to perform steps comprising:

at a first memory usage threshold, requesting at least one of the application programs to close itself;

at a second memory usage threshold that is more critical than the first memory usage threshold, terminating at least one of the application programs without allowing its further execution.

11. A computer-readable storage medium as recited in claim 10, the instructions being executable to perform additional steps comprising:

before performing the requesting step, prompting a user to select one of the application programs to be closed;

before performing the terminating step, prompting the user to select one of the application programs to be terminated.

12. A computer-readable storage medium as recited in claim 10, the instructions being executable to perform additional steps comprising:

before performing the requesting step, requiring a user to select one of the application programs to be closed;

before performing the terminating step, requiring the user to select one of the application programs to be terminated.

13. A computer-readable storage medium as recited in claim 10, the instructions being executable to perform an additional step comprising:

at a further memory threshold that is less critical than the first and second memory usage thresholds, requesting at least one of the application programs to limit its use of memory.

14. A computer-readable storage medium as recited in claim 10, the instructions being executable to perform an additional step comprising:

reclaiming unused stack memory before requesting at least one of the application programs to close itself and before terminating at least one of the application programs.

15. A computer-readable storage medium as recited in claim 10, the instructions being executable to perform an additional step comprising:

discarding read-only memory before requesting at least one of the application programs to close itself and before terminating at least one of the application programs.

16. A computer-readable storage medium as recited in claim 10, the instructions being executable to perform additional steps comprising:

reclaiming unused stack memory and discarding read-only memory before requesting at least one of the application programs to close itself and before terminating at least one of the application programs.

17. A method of controlling memory usage in a computer system having limited physical memory, wherein one or more application programs execute in conjunction with an operating system, comprising the following steps:

at a first memory usage threshold, requesting at least one of the application programs to limit its use of memory

at a second memory usage threshold that is more critical than the first memory usage threshold, requesting at least one of the application programs to close itself;

at a third memory usage threshold that is more critical than the first and second memory usage thresholds, terminating at least one of the application programs without allowing its further execution;

reclaiming unused stack memory and discarding read-only memory before requesting at least one of the application programs to close itself and before terminating at least one of the application programs.

18. A method as recited in claim 17, wherein the reclaiming and discarding steps are performed at further memory usage thresholds that are set in relation to the second and third memory usage thresholds.

19. A method as recited in claim 17, wherein the reclaiming and discarding steps are performed at further memory usage thresholds that are set in relation to the first, second, and third memory usage thresholds.

20. A method as recited in claim 17, further comprising the following additional steps:

before performing the requesting step, prompting a user to select one of the application programs to be closed;

before performing the terminating step, prompting the user to select one of the application programs to be terminated.

21. A method as recited in claim 17, further comprising the following additional steps:

before performing the requesting step, requiring a user to select one of the application programs to be closed;

before performing the terminating step, requiring the user to select one of the application programs to be terminated.

22. A computer-readable storage medium having computer-executable instructions for performing the steps recited in claim 17.

23. A computer system comprising:

a processor;

an operating system that is executable by the processor and that utilizes the physical memory;

a virtual memory system that includes physical memory but does not include secondary storage;

one or more application programs that utilize the virtual memory system;

wherein the operating system is configured to perform the following steps:

monitoring physical memory usage;

at increasingly critical physical memory usage thresholds, wielding increasing control over said one or more application programs to minimize physical memory usage.

24. A computer system as recited in claim 23, wherein the step of wielding increasing control comprises the following steps:

at a less critical memory threshold, interacting with at least one of the application programs to limit its use of memory;

at a more critical memory threshold, terminating at least one of the application programs without allowing its further execution.

25. A computer system as recited in claim 23, wherein the step of wielding increasing control comprises the following step:

prompting a user to designate at least one of the applications programs and then requesting it to close itself.

26. A computer system as recited in claim 23, wherein the step of wielding increasing control comprises the following step:

prompting a user to designate at least one of the applications programs and then terminating it without allowing its further execution.

27. A computer system as recited in claim 23, wherein the step of wielding increasing control comprises the following steps:

at a first memory threshold, requesting at least one of the application programs to limit its use of memory;

at a second memory threshold, requesting at least one of the application programs to close itself;

at a third memory threshold, terminating at least one of the application programs without allowing its further execution.

28. A computer system as recited in claim 23, wherein the step of wielding increasing control comprises the following steps:

at a first memory threshold, requesting at least one of the application programs to limit its use of memory;

at a second memory threshold, prompting a user to designate at least one of the application programs and then requesting it to close itself;

at a third memory threshold, prompting the user to designate at least one of the application programs and then terminating it without allowing its further execution.

29. A computer system as recited in claim 23, wherein the operating system is further configured to perform the following additional step:

at one or more of the memory thresholds, reclaiming unused stack memory.

30. A computer system as recited in claim 23, wherein the operating system is further configured to perform the following additional step:

at one or more of the memory thresholds, discarding read-only memory.

31. A computer system as recited in claim 23, wherein the step of wielding increasing control comprises the following steps:

at a first memory threshold, requesting at least one of the application programs to limit its use of memory;

at a second memory threshold, prompting a user to designate at least one of the application programs and then requesting it to close itself;

at a third memory threshold, prompting the user to designate at least one of the application programs and then terminating it without allowing its further execution;

before prompting the user, reclaiming unused stack memory and discarding read-only memory.

32. A method of controlling memory usage in a computer system having limited physical memory, wherein one or more application programs execute in conjunction with an operating system, comprising the following steps:

monitoring memory usage;

when memory usage is high, sending a message from the operating system to at least one of the application programs requesting the application program to minimize its current use of memory.

33. A method as recited in claim 32, further comprising a step of sending the message to the application program when memory usage reaches a defined threshold.

34. A method as recited in claim 32, wherein the application programs have respective message loops, the method further comprising a step of sending the message to the application program through its message loop.

35. A method as recited in claim 32, wherein the application programs have respective message loops, the method further comprising a step of sending the message to a particular application program that was least recently active.

36. A computer-readable storage medium having computer-executable instructions for performing the steps recited in claim 32.

37. A computer-readable storage medium having instructions for controlling memory usage in a computer system having limited physical memory, wherein one or more application programs execute in conjunction with an operating system, the instructions being executable by the computer system to perform steps comprising:

monitoring memory usage;

at a defined memory usage threshold, sending a message from the operating system to at least one of the application programs requesting the application program to minimize its current use of memory.

38. A computer-readable storage medium as recited in claim 37, wherein the application programs have respective message loops, the instructions being executable to perform a further step of sending the message to the application program through its message loop.

39. A computer-readable storage medium as recited in claim 37, wherein the application programs have respective message loops, the instructions being executable to perform a further step of sending the message to a particular application program that was least recently active.

40. An application program that resides in a computer-readable memory for execution by a processor in conjunction with an operating system, the application program having a message loop that receives messages from an operating system, the application program being responsive to a particular message received through its message loop to minimize its current use of memory.